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CONTRIBUTED ARTICLES

An Apiary and Bee-Keeping in South Dakota.

BY JAMES M. HOBBS.

BE-KEEPING in our new State is also a new industry. The illustration herewith represents my summer and winter home-apiary and this is the eighth year I have wintered my bees as shown in the picture, and with good results.

I work for comb honey only, and use $1\frac{1}{2}$ -story, 8-frame Langstroth hives.

The honey-flow this year was not as good as in previous years, as I got only about 45 pounds per colony on an average, fall count. Some colonies produced as high as 130 pounds of comb honey. We usually get 50 to 75 pounds on the average. Our principal flow is from sweet clover, which is abundant here; also alfalfa.

My method of increase of colonies is natural swarming. I have no clipp queens. I have practiced this method for 20 years, and I will say that I have had only one swarm to abscond in all that time, and for eight years no swarm has settled over four feet from the ground. I could sit in a chair and hive them. At some future time I will describe my method.

Yankton Co., S. Dak., Oct. 17.



Bee-Hive Ventilation During the Winter Months.

BY G. M. DOOLITTLE.

AS I am fixing the bee-hives these days (the forepart of November), as to the matter of covering over and around the frames, my mind chanced to wander over

the past, and trace the way in which I had been led up to where I am to-day as to the subject of ventilation of bee-hives, and in so thinking it came to me that it might not be amiss to tell the readers of the American Bee Journal something about it.

Among many pleasant recollections, the bees are ever foremost, and at 10 years of age I was an anxious watcher of these little creatures, of which father had from 20 to 40 colonies, according as the seasons were good or poor. These were kept in what was then known as the "Weeks patent hive," a hive which had the bottom-board attach to it with wire hooks and staples, and with a button so arranged that, for winter, the bottom was allowed to hang suspended an inch below the hive, while in summer the button was so turned as to bring the bottom-board tight to the bottom of the hive, except the entrance. With this hive father had poor success wintering bees, while a neighbor wintered his safely with a hive closed tight at the bottom and a two-inch auger-hole at the top. This success of the neighbor, and father's poor success, caused him to fasten the bottom-boards of the Weeks hive in winter, or rather leave them during the winter just as they were in summer, while the holes in the top, thru which the bees had access to the surplus apartment, were opened, and the surplus chamber was filled with some old garments, carpets, hay or straw, or something of the kind, just what came most handy. Fixt in this way we had very little trouble in wintering the bees thereafter.

The recollection of this matter caused me to believe that "upward ventilation," as it is often termed, was the proper kind of ventilation to give, when the bees were wintered on the summer stands.

Soon after this, nearly all the bees in these parts died of that dread disease, foul brood, and no more were kept in the family until the year 1869, when I purchast two colonies, thus laying the foundation of my present apiary.

At that time (1869) there were plenty of bees kept all about here in box-hives, very many of which were raised on half-inch blocks at the bottom all around, that being something similar to the old method of ventilation of the Weeks



Home-Apiary of Mr. James M. Hobbs, of Yankton Co., South Dakota.

hive, and quite nearly representing the rim one inch deep recommended by some of the writers of a decade or so ago. But I adopted the plan of "upward ventilation," as it was then termed, altho I now look at it as practically no ventilation at all, in the sense of a draft of air, unless we can call it ventilation which we enjoy when sleeping under our warm comforters on a cold winter's night.

Soon after I commenced to use this upward-ventilation plan, as it was termed, there came a series of winters in which the box-hive men lost all the bees they had, while I met with scarcely any loss, and the bees in the woods seemed to be as numerous as ever. This set me to studying again, and by looking at the bees in their natural home in the hollow tree, I found that the hollow was composed of partly decayed wood, especially above the combs. Thus, in winter, the moisture from the bees passes into the decayed wood which surrounds them, and is expelled each summer by the heat. In this we had something pointing toward the porous covering which many of our best apiarists have used for years with such good success, and also toward the chaff hives used of late years with equally good success. With these chaff hives, and the slow change of air taking place thru the chaff or sawdust cushions, we have something even better than the home Nature provided for the bee; and with hives so arranged there need be very little provision for ventilation at the bottom, for, should the entrance become obstructed with snow, ice, or dead bees, so that all air is cut off from the bottom, the bees can secure all the ventilation they require thru the chaff sides and cushion from above, thus passing nicely along until a warm spell occurs, when they can clear their doorway.

After years of experience with chaff hives, used in connection with sawdust cushions over the top of the brood-chamber, I have become convinced that there is nothing better along the line of hives for wintering bees on the summer stands than this, and I would hereby ask every reader of the American Bee Journal who is at all skeptical on this point to prepare ten colonies in chaff hives with sawdust cushions as above, taking ten others as nearly like them as possible (except that they be left in ordinary hives with lower ventilation), and see if all skepticism does not vanish at the end of three or four years. I even use these chaff hives with sawdust cushions to quite an extent for cellar-wintering, and think that they have an advantage even there.

In connection with ventilation thru porous covering, some think that, as all the moisture is carried off, the bees need water given them to keep them in a healthy condition; but I feel that such is wholly unnecessary, for the reason that I believe it a bad plan for the bees to breed much if any before the middle of March to the middle of April, according to the season and the locality, and bees need no water in the winter season except for breeding purposes. Colonies which commence breeding to any great extent earlier than this are not as good, as a rule, on the first of June as those of the same strength as to number of bees that do not commence to rear brood before the first of April.

To avoid too early brood-rearing it is a great help where they are packt in chaff along this line; for the sun's rays will not arouse the bees to activity, such activity causing brood-rearing every time it shines on them for a little while during the middle of the day when the air is cool otherwise. This early breeding causes a much greater consumption of honey and a far greater loss of bees without a corresponding benefit. When it comes steady warm weather two bees are reared for one old one lost, while in early spring or late winter two old bees are lost to where one young bee is reared; hence anything that causes early breeding becomes a loss to us both in bees and in stores.

Only as we look after all of these items which have a direct bearing on our pursuit, can we expect to become the most efficient in our calling in life.

Onondaga Co., N. Y.



"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at \$1.00.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 726.]

Mr. G. M. Doolittle, of New York, then delivered the following address on

The Possibilities of Bee-Keeping.

There are some who think we have arrived at all the possibilities of bee-keeping, but I do not think so. I am going to prepare what I have to say by reading to you out of God's Holy Word. I will read from the book of Revelation, the 1st chapter, from the 9th to the 19th verse; also from the 3rd chapter, 7th to 13th verse. I am not going to preach a sermon to you to-night, but as something to guide our thoughts I desire to take a text of three words found in the 8th verse of the 3rd chapter—"A little strength."

As John goes back in thought he sees the Son of Man stilling the waves, healing the sick and raising the dead. He now sees more power in Him than when on earth, and as he sees the power he hears Him saying, "Behold, I have set before thee an open door because thou hast a little strength." Of course, this was meant in a spiritual sense, but I do not think I shall be much out of place if I apply it to bee-keeping. *All power comes from God*, and we could not keep bees without that power.

I am reminded of a Scotch girl. There was a high mountainous pass where occasionally a man went down. This girl was imprest to build a bridge over it. She went out among the people, and the result was that a bridge was built. The people were so rejoiced that they wanted to name it after her; but she said, "No! If you must name it, call it 'God and Us.' God gave the power and we carried out His purpose." In this nation, whence comes all this power? We see railroads and electric cars going in all directions; the telegraph, telephone, etc. Whence came the power that brought these about? Does such power come to heathen nations? *No!* it comes from God to Christian nations.

Now, bring it down to the bee; if we have "a little strength" to grasp that idea, "God with us," there is set before us "an open door," and we can accomplish much with the bee. If I have a *little strength* the promise is to me. Do I wish to be a Dr. Miller, Mason, Root, Hutchinson, Elwood? The "little strength," with "the open door," may enable me to equal if not excel them.

There is a story of a little boy who saw some apples, but they were out of his reach. A little further on he saw a larger boy, but he could not quite reach them; so the smaller boy climbed upon his shoulders, and then he could reach them. "If at first you don't succeed, try, try again." A large block of granite was put up for sale one day. Michael Angelo was at the sale. He thought he would buy it. It sold for an enormous sum, but Angelo took it. Some one asked him, "Why did you pay so much?" His reply was, "I saw an angel in the block, and I am going to liberate it." He did so, and became famous for "the angel" in statuary.

Have you tried to understand your locality, and failed? If you do not understand your locality you fail of the best success. When you see your bees coming in with pollen in the spring, follow the bees. Then when a load of honey comes in follow it to its source. The bee-keeper must follow his pursuit to perfection. I told the following story at the National convention in Canada:

Henry Clay wanted the presidency. He came to an old friend and said to him, "Are you going to help me now?" The answer was, "No; you failed me once."

Clay saw he was not going to make anything by that, so he said, "John, do you remember the old days?" John said, "Yes." "Do you remember the old gun?" "Yes." (It was an old flintlock.) "Did the gun ever fail you, John?" "Yes, it failed me once when I needed it most." "What did you do? Throw it away?" "No, I picked the

flint and tried again." "Can you not try *me* again, John?" "Yes, I will pick the flint and try you again." We must pick the flint and try again if we fail.

Do we want strong colonies with no swarming and much comb honey? There are those here who do not believe we can have strong colonies and much honey without swarming. I believe we shall yet have these things because some have "a little strength" to work in that direction. Now, there is no such thing as failure, if we have "a little strength," because there is set before us "an open door."

I love to read Jeremiah, in the 18th chapter. When he was about to get discouraged God sent him down to the potter's house. He saw the potter molding the clay, and just as the potter had it all molded it dropped and went all to pieces. Jeremiah thought it was ruined, but the potter gathered up the pieces of clay and molded it again into a perfect vessel fit for the Master's use. Have you tried rearing queens and failed? What are you going to do? Are you going to give it up? The queen that cannot be "brought to time" in breeding is not the queen for me. I have been working to bring queens to perfection by giving the maximum number of bees just at the time of the honey harvest.

I am requested to tell the anecdote I told at the Buffalo convention of this association two years ago. A certain darky often went to market, but one time it was different—his wife went with him this time. He cried at the top of his voice, "TATOES, TATOES, TATOES!" His wife said, "Keep still, darling, you will wake all the people up." He said to her, "That is what I want to do;" and again he cried, "TATOES, TATOES, TATOES!" That is what we want to do—wake bee-keepers up about securing a large force of bees in time for the harvest.

Do you wish to know about putting on and taking off sections, doing it at just the right time? Then use "a little strength" along that line.

When we entered the bee-keeping ranks we pledged ourselves by thus entering to do our best. Some may not believe we did so. I am reminded of our great ocean steamers. In the middle of the Atlantic one of the stokers was asked, "Are the other stokers all working? Is the vessel going right?" He answered, "I am not the captain, but by taking this place I pledged myself to do the best I could. I am captain of this shovel." He did his part faithfully, and the vessel landed safely in Liverpool.

Have you tried wintering bees and failed? During the winter of 1881-82 three-fourths of all the bees in the United States died. There has been progress in wintering since then, and yet we are not perfect. August is the time to prepare bees for winter. See that each colony has a good queen, bees and food enough. If you wait until December, and then write to Dr. Miller or Dr. Mason about preparing your bees for winter, you will be something like the old preacher whose wife said to him one cold Sunday, "Had you not better put on a thicker pair of pants?" The pair he put on had hung away all summer in the attic, and the wasps had built a nest in the roomy part of them. After getting into the pulpit he commenced to read the 103rd Psalm: "Bless the Lord oh my soul"—oh, what a sting! "Bless the Lord oh my soul, and forget not all his benefits"—Ge-whit-aker, what a sting! I'll tell you what it is, brethren, the word of the Lord is in my mouth, but the devil's in these breeches."

If we put off preparing for winter until December the word of the Lord may be in our mouths, but failure will be ours. There is no time for sitting around listening to idle gossip.

A sailing vessel was stranded off the coast of South America; a signal of distress was run up, and a steamer saw it and asked what was needed. "Water, fresh water," was the reply. "Do you not know you are at the mouth of the Amazon? Let down your buckets and you will find plenty." My friends, we are always in the Amazon of bee-keeping; let down your buckets and dip the fresh water up.

Moses saw the burning bush and put his shoes from off his feet. There are many burning bushes about the bee-keeping pursuit, but he only sees who "puts the shoes from off his feet." After seeing the possibilities we are to go out and tell it to the world, for there are no possibilities in selfishness.

Biddy said to Pat one morning, "Go and kill the rooster." He came to the door with it under his arm, took it by the head, gave it a few twists, and sent it floundering into the kitchen with the blood spurting about.

"Pat, didn't I tell you to kill the rooster?" yelled Biddy. "Faith," said Pat, "it's dead, but it don't know it." The selfish person may go floundering about, but is

dead to the possibilities of apiculture. The first thing for us to do after learning something useful is to go out and tell it to the world. There are no possibilities of a useful thing dying with ourselves because we only wish to profit by it. We are to spend ourselves for others if we would attain to the highest possibilities, as such expending will react on us.

You remember the old metaphor,

"There was a man, his neighbors thought him mad,
The more he gave away the more he had."

And so it is with us, if we try to make the apicultural world better for our having lived in it. The Good Book says, "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

Every time we tell a thing the possibilities are greater thru the reflex action that comes to us, and so by thus telling we keep on growing to the highest possibilities.

It is said that Capt. Cook, when he sailed around the world, planted English flowers at every place he landed, and so he has, thru these flowers, been growing ever since.

No, no, brothers and sisters, bee-keeping is not ours. We may think we have the right to hug things up and keep them ourselves, but it is not so. Apiculture of to-day is what it is because of those who came before us.

Two monkeys discover an apple below a high bank in the water, with the limb of a tree overhanging. They climb the tree; the first attaches himself to the limb, and the second attaches himself to the first monkey, but they are too short. A third came, but still they could not reach it. Along came the fourth, and taking in the situation ran up the tree, over the limb, and down the three suspended monkeys and reached the apple. Will any bee-keeper present tell me that the apple belonged to the fourth monkey? The apiarists of the past are the "mother breasts" that furnish the nourishment for the possibilities of the present. The thought of yesterday is but the inspiration of to-day. He only lives wisely who lives for the possibilities of the future—possibilities to generations yet unborn. Others of us instead of being selfish are telling things that we don't know; we get a little bee-keeping—go out and write for the papers and make lots of noise.

An old darky was plodding and splashing homeward thru a midnight thunderstorm. The winds were blowing, and the rain was sheeting down. Every other moment a flash of lightning slasheth the heavens briefly like a knife of fire. Then followed the thunders, rolling crash on crash, as if the very roots of the hills were being torn from their home in the ages. The lightning would last but a second, and then leave the poor old darky in blacker night than ever. But the thunders were incessant; their rollings were without end. At last the old darky became frightened, and, following a thundrous peal of unusual horror, he plumbt down on his knees in the mud and began to pray, "Oh! Lord," he cried, "far be it from one so humble as I to tell Thee thy business. But if it's all the same to Thee, an' doan't pester Thee or change too much Thy infinite plans, couldn't this storm be managed to give us a leetle less noise an' a leetle mo' light? Amen!"

And so let us, when we do anything, do it for the purpose of disseminating light, not to make a noise.

Again, others of us work with no definite object in view. We should work and toil for a purpose. John Chinaman was hacking away on a stick, and a neighbor asked him, "What are you making, John?" He replied, "It may be a god or it may be a bedstead, for all I know." We experiment so loosely that, at the finish, if asked the result, we can only reply, "It may be a god or it may be a bedstead, for all I know." Let us work so perfectly that we know what we are doing, so that we may hear the Master say, "Because thou hast 'a little strength' I have set before thee 'an open door.'"

Mind has not grasped the possibilities which are before us if we work with the "little strength" we have. Let us not deceive ourselves. This "little strength" must be used intelligently, and for the good of the whole—not for just *me*, if "behold, I have set before thee an open door" of possibilities is to be realized. Understanding it, are you ready to venture? If so, the possibilities are for you. There is no chance of a failure. The power is with our "little strength." The accomplishments of the past are nothing to what there is in store for the apicultural world if we but enter the "open door." Will we do it?

A certain explorer, with his guide, was traveling up the Alps. They came to a certain place where the explorer could see no place to stop. The guide swung himself into a crevice of the rock and put out his hand; seeing it the ex-

plorer said, "If the hand fail I fall into the abyss below. Not to go forward will lose to me the sights for which I came." Assuringly the guide said, "That hand never lost a man."

I fear I have not made this as plain as I might. I have tried, but fear I have failed thru my inability to express myself, but to him that hath "*a little strength*," the Master saith, "He that shutteth and no man openeth, and He that openeth and no man shutteth," "because thou hast "*a little strength*, behold I have set before thee an open door, and no man can shut it."

In conclusion, allow me to say that that hand—that all-powerful hand of the Master—coupled with our hands having a *little apicultural strength*—"that hand *never lost a man!*"

G. M. DOOLITTLE.

Following the address by Mr. Doolittle, Prof. H. W. Wiley, chief chemist for the United States Department of Agriculture, Washington, D. C., spoke as follows on

Food Value of Honey—Its Adulteration and Analyses.

A great poet, as well as one who had a keen insight into the scientific laws of nature, said, about one hundred years ago, in language which I shall venture to translate—

"He who knows not all that has happened
In three thousand years, will never
See the light nor have experience
Even should he live forever."

This statement of Goethe is true, also, in matters connected with honey.

It seems to me, therefore, in discussing the subject of honey as a food, that it would be wise to go back over the pages of history and see what uses were made of this substance during the past three thousand years, or even longer. If you will indulge me, therefore, I will preface what I have to say by a few extracts taken from historical pages, relating to honey and its uses. We ought to know what has been done in three thousand years, but I do not propose to take three thousand minutes to tell you.

EARLY HISTORY.—The tribes of men that live solely, or almost so, on flesh use neither salt nor sweets. The transition from flesh-eating to plant-eating in the early history of all nations is attended with the consumption of salt and sweets. The word sweet is common to all dominant languages. In Sanscrit it first occurs, thousands of years old, as *svadu*, to make sweet; *ydus*, Greek; *snovis*, Latin, etc. The use of honey in early historical times was connected with religious rites, chiefly because the fermented honey-water was supposed to contain a spirit powerful, and needing to be propitiated.

Wine or beer made from honey was known in the earliest historical times, known in Sanscrit as *madhn*, and in Greek as *meu*, and in German as *meth*.

Bee-culture was unknown to many early nations which valued wild honey. It is evident that Homer would have mentioned bee-culture had it been known to the Greeks in his time. Homer frequently mentions honey and its uses, but never suggests that men have anything to do with its production. Homer, in the 9th book of the *Odyssey*, calls wine the "the red honey of the grape." A "land full of honey" to the ancient writers did not mean the ideal land full of milk and honey, but a wilderness where the bees work undisturbed in accumulating their stores.

While some attempts were made before the Christian era to increase the production of honey by man's aid, no true system of bee-culture can be said to have existed 2,000 years ago. This is plainly evident from a perusal of that book of the *Georgics* devoted by Virgil to bees and honey. During Pliny's life (died 79, A. D.) men learned to build rude hives, and even placed in them windows of isinglass in order to watch the bees at their work. Pliny had some remarkable ideas in regard to the propagation of bees. He states that if the carcasses of young steers be covered with dung, Nature will change a portion of the steer's body into bees. (Book XI.) This idea probably arose from the fable of Aristous, the first bee-keeper who helped to compass the death of Eurydice. He was punished for this by having taken from him all his bees. He was advised by Proteus to supplicate the gods in a sacrifice of bullocks. He was delighted to see arise from their carcasses a new supply of bees.

Aristotle, who lived 350 years B. C., states that the bees make the wax, but gather the honey from Heaven-dew. Even up to the time of Virgil, and after, the ancient writers had no notion of the existence of sugar in flowers, but the honey gathered by the bees was supposed to be a

direct gift of Heaven, or, as Virgil describes it, "That gift of Heaven, ethereal honey."

The use of honey in baking is mentioned in the 7th century B. C. At the time of Aristophanes the use of honey in the bakeries of Athens was quite common. (444 B. C.) The Athenian honey was very costly. Aristophanes says, "I beg thee, friend, use some other honey, spare the Attic which costs four crowns."

Xenophon mentions a poisonous honey which made many of his soldiers ill. Investigations in late years, of honeys produced in the locality described by Xenophon, show that this poisonous principle is derived from the Jimson-weed (*Datura stramonium*), of whose flowers the bees are very fond.

In Rome in the earliest times honey was very costly, and it was used only in religious ceremonies and as a medicine. It was supposed to have valuable healing powers. It was only about 170 B. C. that it became cheap enough to be used in baking.

In Cæsar's time honey was used to a considerable extent. Vejanus, a bee-keeper near Falerimer, is said by Varro to have sold annually 10,000 sesterces worth (\$650) of honey from a flower-garden of about one acre in extent. His bees probably poach on his neighbors' preserves.

During the empire, honey merchants and bakers were found in all parts of Rome, and poultry intended for the rich were fattened on honey and ground cereals.

During this period, also, the preservation of fruits in honey was first practiced, and the foundations of a great modern industry laid. The preserving power of honey, however, was not discovered by the Romans, for Herodotus, who lived nearly 500 B. C., says that dead bodies in Eastern countries were preserved from decay by honey and wax.

It is said that the body of Agesipolis, king of Sparta, was preserved and sent home in this manner.

The Egyptians fed their sacred animals, *e. g.*, the crocodile, goose-flesh and honey-cakes, and pictures more than 4,000 years old of bees have been found in Egyptian antiquities. It seems probable, therefore, that the Egyptians were the first to gather honey.

Especially as a medicine honey was largely used in Egypt. In an old Egyptian writing, at least 1500 B. C., have been found numerous recipes for remedies in which honey plays the most important part.

Hippocrates, the celebrated Grecian physician, who lived 450 B. C., describes many remedies in which honey was the chief ingredient, and ascribed to it remarkable curative properties. An ancient fable recites that in thankfulness the bees constructed a hive on his grave, and that honey of miraculous healing properties was produced therein.

Democritus, who was contemporary with Hippocrates, and who lived to be more than a hundred years old, when asked how to attain so green an old age, replied, "Honey within, oil without."

Many curious theories were developed in respect of the curative powers of honey and wine—not perhaps any more absurd than many of the so-called medical theories in vogue at the present time.

Macrobius, 400 A. D., explained the healing power of the mixture by saying that the old wine by reason of its moist nature was warming, while the honey, by reason of its dry nature, was cooling. Pliny, on the other hand, ascribed the good effects to the property of honey which prevents decay.

The early Christian era saw a great impulse given to the production of honey. The souls of the dead were represented as flying to Heaven in the form of bees. Honey became of more general use, and the wax was made into candles for religious uses. The discovery of paraffine has rendered less effective the old Christian legend that God blessed the bees as they were sent from Paradise, and that as a consequence no mass should be said without beeswax candles.

Bee-culture spread with great rapidity over Europe during the first millennium of the Christian era. In Spain honey became an article of export in the early centuries. The tithes of the church were paid in honey in many places. In Saxony honey and honey-bees were so abundant that a fire in Messina was extinguished with honey-bees in 1015. Nuremberg, however, seems to have been the chief center of the German bee-industry. In Russia, Poland and Lithuania immense quantities of honey were produced at this time. A king of one of the Russian provinces was said to have given to the poor honey and honey-wine, while he himself lived on mare's milk.

In the old Indian writings honey is frequently mentioned. The new-born child was welcomed with a religious ceremonial in which honey was the chief material em-

ployed, and the first artificial food of the infant was composed of honey and sourmilk.

In taking honey from a hive the sacred books of the far East prescribed great care, in order that the hive be not injured. The wanton destruction of a hive was regarded as a heinous sin, and one of the 88,000 hells which are conveniently provided in the theology of Brahma and Buddha was set aside especially for sinners of that class.

The cultivation of the sugar-cane, which became generally known at the time of the Crusades, and the discovery of beet-sugar, 150 years ago, have made artificial sweets so cheap that bee-culture no longer, as it did in the middle centuries, controls the market for sweets, and few bee-hives are now found in the European countries where they were abundant 1,000 or 500 years ago.

When we regard honey as food, of course we recognize that it occupies the same position as sugar or any other soluble carbohydrate.

I have been much interested in what I have heard to-night about honey as a food, especially in the comparisons made between honey and butter. I have not time to give the analyses of honey in comparison with other food, as I had intended. While honey may supply the place of starch or



—From Gleanings in Bee-Culture.
Prof. H. W. Wiley.

butter in the animal economy, it cannot supply the place of protein. Therefore, honey and meat cannot be compared as articles of diet, since they belong to entirely different classes of foods. Man can live by bread alone, altho the Good Book says he cannot.

Honey can supply heat and support energy, but it cannot nourish tissues containing nitrogen, without the help of some other kinds of nourishment, as, for instance, eggs, beans, lean meat, milk and bread.

It is very properly said that honey is one of the most easily digested foods of any class. If we eat starch it must first be converted into sugar before it undergoes the final processes of digestion. While starch is just as nourishing as honey, it must first undergo this preliminary fermentation before it becomes useful as a food.

A soldier must have something to eat on the march, something concentrated and quickly assimilable. While he is not nourished by sugar alone, yet sugar or honey furnishes a condens'd emergency ration of the greatest value.

Among rice-eating nations, the Chinese and Japanese, for instance, can endure long working hours without fatigue. This shows that a food very rich in carbohydrate can support muscular vigor.

The pusher of the jinrikisha will go longer distances than many a flesh-eating laborer could possibly cover. Rice

is a nourishing food, because it supplies carbohydrates. Honey is a food of a similar kind.

I will admit that to many people honey is a luxury. We can buy sugar that contains no water for five cents a pound. Honey contains water—we do not care to pay for water, which is not regarded as a food of commercial importance. Sugar has made sweets so cheap that honey is not in so great demand as formerly, and yet honey is so cheap that it can no longer be regarded as a luxury.

When I was a young man, and trying to get a little education, I was anxious to get into Switzerland, not so much to get learning, but to get honey. But what I got there was American glucose. I didn't see a bee-hive while there. If you have a variety of bees that can make honey out of snow, take them to Switzerland; they would find there an inexhaustible supply of the raw material.

It is surprising what a rich country we have—what an amount of luxuries we have! Most of us can afford to have honey for breakfast, and we would all be healthier if we would eat more honey and less meat at our matutinal meals.

It is a rare thing to find honey on a hotel table, and if you do, it's glucose!

I will dwell only a few minutes on the third part of my subject, and that is the adulteration of honey. I can add nothing to the remarks that have been made on this subject, but it is an important one. If we could stop the adulterations there would be no trouble in getting a good price for our honey, and people would eat far greater quantities of it did they feel certain that it was genuine.

I do not believe in prohibition of any kind. I believe in man being a free moral agent. If Mary Walker wants to wear trousers, let her wear them. Some one in the Good Book said, "If meat make my brother to offend, I will eat no flesh while the world standeth." I would not go so far as that, but if we are to be total abstainers it should be voluntarily, and not at the mandate of the law. We all have the same rights in what we should wear, eat and drink.

Butter has no more right in the market than oleomargarine, but oleomargarine has no right on the market as butter. If I were going on a distant journey I would take oleomargarine, for it is harder than butter, and would keep better. But when I buy butter I don't want to buy oleomargarine. When I buy honey I don't want to buy glucose.

I have heard speeches against food adulterations that have done more harm than good, because of their intemperate statements. I was once asked, "What is the extent of the adulterations of food?" I answered, "It is difficult to give the exact figures, but I think at some time or other, and in some country or other, about 90 percent of all human foods have been adulterated. But the actual existing amount of adulteration is probably less than five percent." Well, the newspapers reported that Dr. Wiley had stated that 90 percent of all foods on the market were adulterated. Well, that alleged statement was "sweeter than honey" to Germany and France. It was copied in all the trade and agrarian journals of those countries as a reason for excluding American food products from their markets. On any other subject extravagant statements do more harm than good.

I hope to see the day when we shall have a national law and State laws, regulating the manufacture and sale of adulterated foods; when concealed adulterations of food products will be a criminal offence, and the "little strength" we have now in that direction be grown into a national power, protecting industry and securing honest markets for its fruits. In the present condition of affairs one cannot be certain of the composition of the many attractive dishes a well-spread table offers him. He hesitates before partaking of the feast, no matter how tempting the scene may be. The one question he propounds to himself has been well put by the poet who pertinently asks—

"I WONDER WHAT'S IN IT."

We sit at a table delightfully spread,
And teeming with good things to eat,
And daintily finger the cream-timed bread
Just needing to make it complete
A film of the butter so yellow and sweet,
Well suited to make every minute
A dream of delight; and yet, while we eat,
We cannot help asking, "What's in it?"

O maybe this bread contains alum and chalk,
Or sawdust chopt up very fine;
Or gypsum in powder, about which they talk,
Terra alba just out of the mine.
And our faith in this butter is apt to be weak,

For we haven't a good place to pin it,
Annatto's so yellow and beef fat so sleek—
O I wish I COULD know what is in it.

Ah ! be certain you know what is in it,
'Tis a question in place every minute.
Oh ! how happy I'd be could only I see,
With certainty, all that is in it.

The pepper, perhaps, contains cocoanut shells,
And the mustard is cotton-seed meal ;
The coffee, in sooth, of baked chicory smells,
And the terrapin tastes like roast veal.

The wine which you drink never heard of a grape,
But of tannin and coal-tar is made,
And you could not be certain, except for their shape,
That the eggs by a chicken were laid.

And the salad which bears such an innocent look,
And whispers of fields that are green,
Is covered with germs, each armed with a hook
To grapple with liver and spleen.

No matter how tired, and hungry, and dry;
The banquet how fine; don't begin it
Till you think of the past, and the future, and sigh,
"O I wonder, I wonder what's in it."

And the preacher who prates of the glory that waits
On the saints, and asks, "Have you seen it?"
And tells you how hot it will be for the sot
And the sinner, at last—does he mean it?

The political boss who asks for your vote,
And promises not to forget it,
When landed at last in a place of some note,
Don't you think you'll surely regret it?

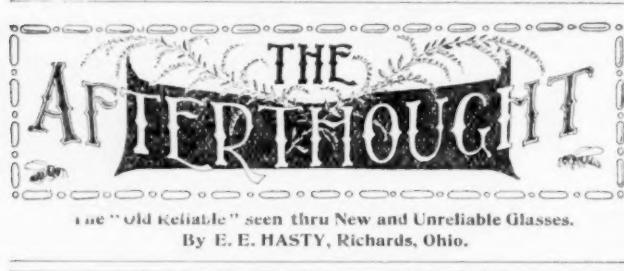
And the maid of your choice, with the heavenly voice,
Whom you've loved for a month, if not longer,
Perhaps has said "Yes," and it's time to rejoice,
And foster the faith that grows stronger.

But that true heart, so dear, O you tremble with fear,
And doubt when you struggle to win it ;
And now that it's yours, I beg do not jeer,
When I ask, "Are you certain what's in it?"

H. W. WILEY.

The convention then adjourned until 9:30 a.m. the next day.

[Continued next week.]



PURE-FOOD LEGISLATION.

A grandly notable paper deeply concerning all mankind, and on a subject outranked by very few possible topics, is E. T. Abbott's paper on pure-food legislation. Even if it isn't quite true that it outranks "expansion" and "currency," that indication of the writer's enthusiasm can easily be forgiven. No harm to remember, however, that legislation on expansion and currency is practically self-enforcing in most cases, while the best imaginable pure-food law safely on the books would only be one short step. Enforcement would be the long step. All honor to Mr. Abbott for his right stand for the principle—"benefits for all," and no sly favors or tricks. Our own people have not been in the past quite clear-skirted of tricks. To get legislative bodies to pass what seemed to be a pure-food law, but which would turn out to be a law to prevent selling under its own name, or even producing, sugar-honey, was a trick in high repute during the sugar-honey flurry. (Page 660.)

MR. THEILMANN AND THE DICKEL THEORY.

In Comrade Theilmann's experiments, page 643, where he continually gets a few drones hard to account for, there is another explanation possible besides the one he is steering for. It may be that queens often lay an unfertilized egg (machine drops stitches) in ordinary laying, and that these are seldom noticed because usually the bees leave them to perish instead of developing them. If the bees can

develop one sex just as well as the other of the same egg, then the proportion of 20 drones to 2,500 workers looks curious for a case where drones are earnestly desired. It would look more like it to see 500 drones or more.

MR. PETTIT'S APIARY.

Mr. Pettit's apiary, which opens out No. 41, looks like business—business first and beauty second—not business first and beauty never thought of, as some apiaries appear. It evidently belongs to the close-order class of apiaries—worrysome to the whim of groupists and open-door folks, who shiver when they contemplate the chance of a young queen's getting bewildered and lost. But Mr. P. and his clan would shiver the rather at walking a quarter-mile with a load when a few rods would answer as well.

A KINK IN RETAILING HONEY.

About the very important matter of working up a retail line, Judge Terral, of the Central Texas convention, offers an unusual suggestion—still I guess he's right. Don't seek to sell a very large lot to one customer the first time you go round. They'll eat too much, get sick of honey, the unattractive remnant with flies and things in it will lie round time out of mind (just like any other unattractive remnant), and they'll never buy of you again, because, forsooth, they "have some honey." (Page 644.)

WHITE COMB FROM DARK HONEY.

Mr. Aten is not to be wondered at for the indignation with which he denies that ill-tasting, black-insect secretion can be elaborated into delicate white comb, beautifully capt. One would think not, indeed; yet he is almost certainly wrong. Sorry. If he was only right, the scamps who spoil markets by pushing off such stuff would have less success. (Page 645.)

THE TRAP OF APICULTURE.

McLennan's apiary is also one of the close-order kind, but seems to have alternated colors to help bees and queens locate home—good thing as far as it goes. Wonder what it is he's got on the top of so many of the hives—clampt sections all ready to go on, I guess. Captivating story, the way he was captivated and forced to be a bee-keeper. Apiculture is a trap, and man he's a mouse; if he don't want to be caught he'd best not monkey round much.

FALL FEEDING OF BEES.

I guess we can get pretty general agreement upon the saying of C. P. Dadant, page 658, that in the matter of colonies short of stores in the fall, the worst policy of all is to feed stingily, and have them starve to death, after all. And I would add this much further: With good stores of their own collection, and left entirely alone, bees will sometimes squeeze thru alive with not more than five or six pounds. Feed them two or three pounds more, and keep them in a flurry a week or so doing it, and I presume the result would be less live colonies in the spring. Good idea of his about atmospheric feeders. First invert them over a pan till all that will readily run out has flowed, then put them over the bees.

FREE BOARD AND MUSKMELON HONEY.

That was a remarkable offer Pres. Whitcomb tells of, page 659—free board to the apiarist that would bring his apiary to the melon-fields—but let us see, let us see! Columbus and Joliet have offers out not dissimilar in that one respect. With muskmelons raised by the square mile we ought to be told just what sort of honey muskmelon honey is. I thirst to know.

THE WICKED ADULTERATORS.

And so the adulterators themselves spread the idea that nearly all honey is adulterated, the same (and for the same reason) that "green goods" men spread the report that nearly all paper money is counterfeit. Page 659.

NEAR HIVE-ENTRANCES AND QUEENS.

"No danger of losing a young queen when two hives have entrances six inches apart, if there are only two." (Dr. Miller, 662.) I would have hesitated to put it quite as strong as that; but maybe it's right. You know when a young queen comes home, the bees (it has been said) sometimes incline to worry her a little. Might she not in the excitement of the occasion pull away, take wing again, and so get on the wrong door-step, finally?

SECTION-CLEANING MACHINES—"REST IN PEACE."

Yes, yes, those section-cleaning machines our Boss inquires after in editorial note, page 664! Where are they, indeed? The racket they made was like unto the racket of

a chari-vari—and lasted about as long. Well, perhaps the lapboard and queer old knife that have done service so long constitute, after all, a very fair section-cleaning machine.

THE WHOLE-HOGGISH COMMISSION MAN.

Sometimes it's best to throw an old, soiled blanket over repulsive phases of human nature, and just say nothing—would be inclined on some account to do so for that commission man on page 664, but the quiet, confirmed, cheerful, business whole-hoggishness with which he makes a forced sale of two barrels of honey at two cents a pound is bringing sadness into too many humble and worthy homes. What does he care? He's all right, as long as the two cents covers commission and expenses. Guess we had better blow a trumpet before him, and keep blowing it till even his brazen cheek begins to blush.

QUEENS BRED FOR BUSINESS.

O yes, breed queens for business rather than for color. Page 666. (Some may have heard that remark casually dropped before.) But if the breeders ever do, it will be a hard time for those little George Washingtons who cannot tell a lie—hard, anyhow, for those Jim Need-Washingtons who don't like to have lies told to 'em. On the whole, it's rather nice for a man to be able to *see* at once that he has got just what he sent for; and these wise mentors would rob us of this bliss.

A TRIPLET OF AFTERTHINKS.

Dr. Miller's dozen cages of discarded old queens, lying in a pile out in the shade, bathed in a volunteer—ladies' aid society, for instance—and swarming and going back to the cages again once or twice every day, is unique enough to make a fellow smile (and think) if he is not too much bored. Page 667.

I like the temper of Mr. Bownds, page 669, who tells of the bad queens he reared for his own use, and then adds, "What's the matter with me?" Rather more Christian-like than flinging too-angry pot-hooks at somebody else.

Hold on, Mr. Prankard! We "won't believe fish-story, too," if you don't quit telling us that every queen is where she ought to be, in that beautiful Herman apiary. Page 669.



DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

A Beginner's Questions.

1. How do you tell whether or not the hive is full of honey?
2. When do you take out the honey?
3. Do you take out all the honey at once?
4. Suppose one starts with 14 or 15 colonies of bees, must there be a queen in each hive?
5. How do you get the wax, and how is it purified?

CALIFORNIA.

ANSWERS.—Before answering your questions, let me advise you in the strongest terms, if you have any thought of starting in the bee-business in the spring, to get one or more text-books on bees and make a thorough study of the matter. It is perhaps not putting it too strongly to say that for every colony you start with you can afford to pay a dollar for a text-book, rather than to do without. If you start with 14 or 15 colonies, the careful study of a good text-book may easily make a difference of \$14.00 or \$15.00 in results. The advice can hardly be made too emphatic, get a good text-book and study it. Now to your questions:

1. With the old-fashioned skeps or box-hives, the common way to decide as to the amount of honey in a hive was to heft it. Every pound of honey, of course, adds just so much to the weight, and by lifting the hive you can gain some idea as to the weight of its contents. You may do

the same way with hives of a more modern pattern, but there are better ways. Nearly all modern hives—perhaps it is better to say all modern hives—have movable combs, and you can take out the combs and see how full they are. But you must understand that there are two different apartments that may be in a hive—the brood apartment, and the surplus apartment. Generally no honey is taken from the brood apartment, and it is not very important to know how much honey is in it, only before winter or at such times as bees are gathering nothing, for if the brood-combs should become entirely empty of honey there might be starvation.

The honey taken is from the surplus apartment, and if it is to be extracted, then you can lift out the combs and see whether they are full. If it is comb, all you need to do is to uncover the top and see whether the sections of honey are sealed over.

2. Extracted honey is generally taken from time to time as often as enough combs are filled and sufficiently sealed. Some do not wait for the honey to be sealed, but it is considered better practice to wait until at least two-thirds of the cells are sealed. In such case the honey is thicker and riper. Some of the best bee-keepers do not extract till the close of the honey harvest, having a sufficient number of extracting-combs to allow extra stories to be added as often as needed.

While it is true that for extracted honey it is all the better to leave it on the hive till the close of the season, the same does not hold true for comb honey. The honey may be thicker and richer, but comb honey sells to a large extent on looks, and the whiter it is the better. If left on the hive after it is sealed, the comb gradually becomes darkened, so it is taken off as soon as a super full of sections is sealed over, with perhaps the exception of the corner sections, for if you wait till these are entirely sealed the middle sections will generally become darkened.

3. From what has been said you will see that in some cases all the surplus honey is taken, and in other cases only part. As a rule, however, all the *surplus* honey is removed from the hive at the close of the honey harvest.

4. Yes, each colony must have a queen of its own, so as to lay eggs enough to keep up the population. You might do with only one queen for several colonies by moving her in rotation from one hive to another, but this would be hard on the queen, and the colonies could not be kept strong. The plan is not advised.

5. Formerly there was an annual pruning of the combs, the lower portions of the combs being cut away, and wax was also obtained when colonies were "taken up" or brimstoned. Neither of these plans is now followed in this country, and wax is only obtained from the melting up of defective or broken combs, or of drone-comb, and from the cappings of extracting-combs. You will hardly need to take any wax for six months or more to come, and will have plenty of time to study up the minutiae of the matter before that time in your text-book. If you start in next spring with 14 or 15 colonies and with no particular knowledge about bees, it is quite possible that by the spring of 1901 you may have the brood-combs of 14 or 15 colonies to melt up into beeswax. Perhaps you may do well to start with a smaller number, increasing your number as you get experience.

Ventilation of Hives.

Mr. C. P. Dadant, on page 675, says, in telling how he places his hives in the cellar:

"We usually take them without cap, or bottom. Our hives are all supplied with straw mats....In the summer we have an enamel cloth between the brood-combs and the straw mat. In the winter the enamel cloth is removed and the mat is laid directly over the frames, and this straw mat is quite sufficient to separate the hives that are piled one upon another."

I have puzzled my head not a little to know how his hives are ventilated.

IOWA.

ANSWER.—In the summer-time enamel cloth under the straw mats prevents the bees from propolizing the mats, and when the enamel cloth is removed there is plenty of ventilation thru the mats. Even if a hive with a bottom-board should be set over the mat, the mat is of such thickness that the air from the hive can escape laterally. Unless the entrance of the hive is quite small, very little upward ventilation is needed. Indeed, my hives, when in the cellar, have no upward ventilation, but the wood covers are glued on tight, just as they were on their summer stands. But the entrance is large, 12x2 inches.

GEORGE W. YORK, Editor.



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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change “d” or “ed” final to “t” when so pronounced, except when the “e” affects a preceding sound.

Helping on the Pure-Food Bill.—On page 696 we suggested sending Rev. E. T. Abbott's address on pure-food legislation to members of Congress. Mr. Ariel Wellman, of Rensselaer Co., N. Y., acted on the suggestion, and afterward received the following acknowledgement from Representative A. V. S. Cochrane, to whom was mailed a copy of Mr. Abbott's address as given at the Philadelphia convention, and published in this journal:

HUDSON, N. Y., Nov. 2, 1899.

ARIEL WELLMAN, Esq.—

Dear Sir:—Your letter of Oct. 30 is at hand. Also the market copy of the American Bee Journal, which I have read with much interest. I am thoroly in sympathy with the ideas there express, and certainly shall be glad to avail myself of any opportunity to promote the cause in which you are interested.

Sincerely yours,

A. V. S. COCHRANE.

We still have copies of the Bee Journal containing Mr. Abbott's address, and will be pleased to furnish them upon request for the purpose indicated above.

A Cuban Bee-Keepers' Association.—Mr. Harry Howe, now of Cuba, wrote us as follows Nov. 7, about the organization of the first bee-keepers' association in Cuba:

EDITOR YORK:—The office of Dr. James Warner, in Havana, was the place chosen for the organization of the Cuban Bee-Keepers' Association. Among other items of business was the unanimous election to honorary membership of the following: Frank Benton, O. O. Poppleton, E. R. Root, W. Z. Hutchinson, H. E. Hill and George W. York.

Resolutions asking for a foul brood law were passed. Section IX of the proposed law requires the inspection of all

bees coming into Cuba, and the immediate destruction of those found to be infected with foul brood, without compensation to the owner. The customs inspectors are to notify the foul-brood inspector of all shipments of bees received.

The officers of the new association are: President, Dr. James Warner; Vice President, Padro Cassinon; Secretary, Harry Howe; Treasurer, Juan Ranelo.

The association has good prospects for success, as there are many special problems facing the Cuban bee-keepers which require co-operation for their solution.

HARRY HOWE, Sec.

We wish to thank our Cuban friends for the honor conferred upon us, as mentioned in the above. We also bespeak for the new Cuban bee-keepers' organization every possible success, and all the personal profit and enjoyment that comes from the interchange of ideas and the meeting together of those whose interests are so closely allied.

Exportation of Honey, the Australasian Bee-keeper says, is the most important subject ever brought before bee-keepers, meaning, of course, bee-keepers of Australia. The London market does not take kindly to Australian honey with its very market flavor, and the editor thinks the British palate has had so much of sweetened liquid that it cannot appreciate a delicate aroma. So the pure article must be sent without any mixing, educating the consumer to know what honey is. J. D. G. Caddan thinks there is a sufficient home market for the best honey, and producers of the dark article that brings only 2½ to 3 cents a pound should give up bee-keeping and take up poultry.

Honey for Bakers is being used more and more, says Editor Hutchinson in the Bee-Keepers' Review; “and the beauty of it is that they cannot use adulterated goods. The least amount of glucose ‘spoils the cake.’”

Irritating Effect of Propolis on the Skin.—The perfect impunity with which nearly all bee-keepers handle propolis has caused reports of injury therefrom to be received with some degree of skepticism. Those who have had particles of propolis fly in the eyes know how very irritating it is to the tender membranes of the eye. Is it not reasonable, then, to believe that the skin on some people's hands may be so much more sensitive than common as to make propolis poisonous to them? It is well known that there is a great difference in the sensitiveness of the skin in different persons. Those who can handle poison ivy as freely as clover, and with as little harm, might be unwilling to believe it poisonous, were it not that so many can give sad testimony to the contrary. A few in this country have reported poisonous effects on the hands and face from propolis when they were scraping sections. Now comes Bonnemere de Chavigny, in *Revue Internationale*, and says that when he scrapes propolis from frames, supers, etc., with naked hands, market results follow. Within 24 or 48 hours a redness of the skin appears, with an eruption of slight pustules, sometimes with and sometimes without smarting, these symptoms disappearing in two days or less. The most striking feature in the case is that after the end of a week or two the skin peels off in a disagreeable way, but without pain.

The Extermination of Basswood.—Editor Root says supply manufacturers may yet be obliged to make four-piece sections, from the fact that no other than basswood will do for the one-piece, and that is rapidly disappearing. If lumber could be brought from Canada free of duty, the matter would be different. Mr. Root says:

“The supply-manufacturer has been blamed for killing the goose that lays the golden egg. But the goose-killing was commenced first and carried on far more extensively by

furniture-makers. Since there has been such a sharp advance in the price of lumber, especially of pine, basswood has been used by planing-mills for regular house-building purposes. It is still cheaper than pine; and contractors, in order to meet old figures, have been compelled to take a cheaper lumber, with the result that basswood has been taken. Some of the most extensive lumbermen say they can see in our northern forests only about ten years' more supply of this favorite timber. The basswood areas are getting to be more and more scarce, with the result that section-lumber will have in time to be of some other less desirable timber.

"But perhaps you may ask why supply-manufacturers use this valuable timber when it is so much needed for honey. For the simple reason that the furniture-makers and planing-mills will use it if we do not. What care they for the bee-keeper who desires to produce honey?"

"The Question-Box is approved by Stenog, in *Gleanings in Bee-Culture*," says the *Bee-Keepers' Review*, "even if the answers are contradictory." But Editor Hutchinson thinks the contradictory answers give but little light if plain "yes" and "no" without any reasons.

Tin vs. Wood for Honey-Packages.—In *Gleanings in Bee-Culture* for Nov. 1, Editor Root has this to say in reply to a contributor who seems to disfavor quite strongly the use of tin honey-packages:

"Perhaps the kegs are more convenient for you at your end of the line; but our experience is that nearly all kegs and barrels of honey, by the time they get to Medina, are leaking slightly, and some of them badly. Our honey-man, Mr. Boyden, is completely disgusted with these wooden packages. On the other hand, he says honey in square cans holding 60 pounds usually comes thru in good order, and is much more convenient to sell again, because the packages are smaller, and the honey can be sold in large or small lots.

"There is no doubt at all that kegs are much more convenient for the producer; but they are a great nuisance to the average *buyer*; and in many cases it is the producer who has to pay for the leakage. He in turn becomes disgusted with his honey-man, as he naturally thinks he has misrepresented."

Right you are, Mr. Root. Wooden barrels are too risky to ship liquid honey in; and they hold too large a quantity for many users of honey, unless for large concerns who can take a carload for bakery purposes; and then even they prefer to handle it in tin cans.

We notice that scarcely any bee-supply dealer lists wooden barrels nowadays. Why? Because the handy and safer tin can is rapidly replacing the risky "wooden tubs" for shipping honey.

"Fillers" in Bee-Papers.—Editor Leahy, of the *Progressive Bee-keeper*, has this "compliment" for convention essays:

"It always lookt to me that the only importance that could be attacht to bee-convention essays was for "fillers," as the ground covered by those essays is practically exhausted thru the bee-journals by the same writers before written for said conventions."

As the American Bee Journal publishes more convention essays or papers than all the rest of the bee-papers combined, of course the suggestion of using "fillers" strikes us the heaviest. But that is all right. We can stand it admirably. Just see what a fine "filler" Prof. Wiley's convention paper is, in this number, and the one by Mr. Doolittle, who is also an editor of the *Progressive Bee-keeper*. Then turn back, and look at Mr. Craycraft's essay on bee-keeping in Cuba and Porto Rico; Mr. Abbott's on pure-food legislation; and others that might be named. Pretty fine "fillers," aren't they?

Then turn to the *Progressive Bee-keeper* for November, and look at the "story" it is running—five pages of it in that number. Talk about "fillers!" If that isn't a "filler,"

we give it up. A bee-paper can hardly compete with the excellent story-papers of the present day—but as "fillers" stories may be a necessity for some bee-papers.

Editor Leahy spoke that time without thinking. There are too many of our best bee-keepers who have written essays for conventions, to dub their productions as "fillers," in the sense meant by Mr. Leahy. But in the best sense of the word they are like a big, wholesome dinner to a hungry man—a genuine "filler" and satisfier.



MR. A. I. ROOT is cautioned by one of his lady friends—Mrs. F. I. Schuyler—who writes him thus, as reported in *Gleanings in Bee-Culture*:

"DEAR BRO. ROOT:—I am glad you have quit sending for patent medicine, and taking it to see whether it is good for anything, as I do not think it your duty to become a martyr for the benefit of your readers."

That is a timely caution for Mr. Root, for we understand that some of the "patent medicine" sent out is about 90 percent whiskey, and labeled "Bitters," so as to evade prohibition laws in certain States. It beats all how some men will lie in order to make a dollar. Money is the ruination of many a man. Some will even give their very souls, including their hope of immortality, for only a few paltry dollars. The "Almighty Dollar" is getting to be altogether too mighty.

FRANCIS JOSEPH, emperor of Austria, has an apiary in his private garden, not far from the windows of his palace, for convenience in observation. The government gives about \$12,000 a year for the purpose of developing scientific apiculture. It is worthy of note on the part of the various European governments, that they favor in every way men of talent, rich or poor, not only in bee-culture, but in all the arts and sciences. Even Russia, beginning with Peter the Great, has offered every inducement for artists and artisans to go there to live. The result is, that St. Petersburg is now probably the finest capital in Europe, while less than 200 years ago its site was a dreary bog. The king of Bavaria appropriates annually about \$8,000 to promote scientific bee-keeping.—*Gleanings in Bee-Culture*.

THE THANKSGIVING NUMBER of the Saturday Evening Post, in its stories, poems, pictures and general articles, will be the most attractive number of the magazine yet issued. In this number Robert W. Chambers has a seasonable out-of-door story, entitled "The Hunter"—the romance of a poacher's pretty daughter. Other features are: Edwin Markham's latest poem, "The Lyric Seer;" "An Electrical Transaction"—a Tale of the Transvaal War by Robert Barr; "At Dawn," by Octave Thanet, and "The Minister's Henhouse," a droll story by C. B. Loomis. Two notable articles in this number are "Lincoln as Candidate and President," by his old friend and political ally, Colonel A. K. McClure, and "Our New Prosperity," by Frank A. Vanderlip, Assistant Secretary of the Treasury. The Thanksgiving number of the Saturday Evening Post will be on all news-stands Nov. 23, at 5 cents a copy. If not convenient to get it there, address the publishers, Curtis Publishing Co., Philadelphia, Pa., enclosing the amount.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

The Premiums offered on page 749 are well worth working for. Look at them.

Do you want a Good Market for your Crop of Honey, BOTH COMB AND EXTRACTED?



We are in position to handle any quantity, large or small, to better advantage than any other house, for the following reasons:

We deal almost exclusively in honey, giving it our closest attention all the year round.

We keep ourselves thoroly posted as to the result of the crops gathered in the honey-producing States.

We are acquainted with the most desirable trade thruout the country, and know exactly what their wants are.

We know, thru our long experience, the different varieties and qualities of honey; therefore know what we are selling, and no fear of selling fancy stock at the price of a third grade.

We handle by far the bulk of all the honey sent to New York, and our volume of business enables us to make the charges very reasonable.

Why, then, should we not be able to handle your crop to advantage, and do you justice in every respect?

We handle not only on commission, but **WE BUY OUTRIGHT** as well, from small lots to carloads, for spot cash.

If you prefer to sell your product, write us, stating quantity you have, quality, and how put up, and we will make you our cash offer.

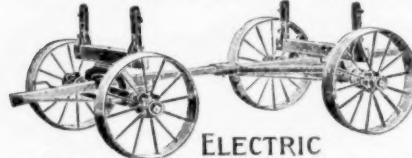
We shall be glad to correspond with you in regard to your crop, and hope to have the pleasure of hearing from you soon.

HILDRETH & SEGELKEN,
120 and 122 West Broadway, NEW YORK CITY.

43A71

BUY THE BEST.

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and



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rear bounds are made from the best angle steel, which is neater, stronger and in every way better than wood. Well painted in red and varnish. Extra length of reach and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co., Box 16, Quincy, Ill., for their new catalog, which fully describes this wagon, their famous Electric Wheels, and Electric Feed Cookers. Please mention the Bee Journal.

Glass Honey-Jars !

We have two sizes of clear, flint-glass Jars, No. 1 holding a scant pound of honey, with an opal or white top held on with a screw metal band under which is a rubber to prevent leakage. No. 2 is a rather tall flint-glass jar with tin screw-cap, holding $\frac{1}{2}$ pound of honey. Both are excellent for retail honey-packages, and are put up in single gross lots. The prices are per gross, f.o.b. Chicago, for the No. 1 jars, \$5.25; for the No. 2, \$4.25.

We can fill orders promptly for these jars. They give excellent satisfaction, we know, for we have used the same jars for several years.

GEORGE W. YORK & CO.
118 Michigan Street, CHICAGO, ILL.

BEE-KEEPERS ! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.



Warming Cellars with Oil Stoves is all right, according to the Bee-Keepers' Review, providing there is provision for carrying out the foul gasses without having them mingle with the air of the cellar. The editor once heated his office in the fall with an oil-stove, but had to quit it on account of headache. There was no chimney to carry off the vitiated air. In cold spells he had warmed his cellar with an oil-stove, and found it to work all right. But he had a hood over the oil-stove connected with the stove pipe in the room above by means of a $2\frac{1}{2}$ inch tin-pipe.

Moving Bees on a Wagon.—A beginner asking in the National Stockman about moving bees on a wagon, is answered about as follows:

"Just what is the best way to fasten the bees in without fastening the air out, depends somewhat on the kind of hive. If it is a box hive, the hive may be turned upside down and wire cloth fastened over the entire opening of the bottom that is now the top, and the hive may be carried in this inverted position. Be sure that you don't lay a hive on its side; the combs would almost be sure to break down. Better prepare your hive for moving at a time when bees are not flying, in the morning or evening. On a cool day when bees do not fly all day, the preparation may be made at any time of day. Give the bees just enough smoke to keep them in the hive till you get them fastened in.

"If the bees are in a movable-comb hive, carry them right side up. If the entrance is large enough to amount to six square inches or more, and if the day is too cool

The Midland Farmer (SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors for free samples, and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,
Wainwright Building, ST. LOUIS, MO.
7Dtf Please mention the Bee Journal.

HENS LAY BEST
—in fact they lay double the eggs winter and summer when fed Green Cut Bone, **Mann's New Bone Cutters** cut all hard and soft bones, meat, gristle, fine, fast and without choking and run easy. Clover cut with our **Clover Cutters** helps wonderfully. Mann's Granite Crystal Grind and Feed Trays too. Catalogue FREE.
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SWEET CLOVER And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	\$1.00	\$2.25	\$4.00
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.
Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, CHICAGO, ILL.

Root's Column

WE
HAVE
RECEIVED
REQUESTS
FOR
945 COPIES
GLEANINGS
IN BEE-
CULTURE
FOR NOV. 15.

Did you read our ad. in last week's American Bee Journal? Have you seen a copy of Nov. 15 Gleanings in Bee-Culture? If not, send your request at once. We send a copy free if you mention the American Bee Journal. Sample pages of our A B C of Bee-Culture free if you have never seen it.

THE A. L. ROOT CO.
MEDINA, OHIO.

for bees to fly, say down to 40° or thereabouts, all that is necessary is to close the entrance with wire-cloth. If the day is warm or the entrance small, it is better to take off the cover of the hive and put wire-cloth in its place.

"If you can have your choice just as well, it may be better to take a day when the thermometer stands somewhere from 45° down to 32°, or even a little lower, for on such a day if some of the bees should get out they will not be likely to sting the horses."

Queen-Rearing is discuss in Australasian Bee Keeper by H. L. Jones, the man said to have the largest queen-rearing establishment in Australia. He says a large percent of cells will be accepted and work out in an upper story over a strong colony in a honey-flow, otherwise there must be steady, judicious feeding, and it is then better to have the cells started in strong, queenless colonies, two days later putting them in an upper story between two frames of brood in all stages, this brood having been put in the upper story a day or two previously. He has been fairly successful in getting cells accepted without royal jelly, but better with it. Altho the bees remove all the jelly given, it seems to act as a suggestion to them. A hot knife is needed to cut the cells apart, and if a cell is given to a nucleus at the same time its queen is removed, a cell-protector is used. With larvae of the right age, the queens hatch in a little more than 11 days, and begin laying 10 or 11 days later.

Four Stray Straws in Gleanings in Bee-Culture read as follows:

"Sometimes it happens that, by some means, some nice sections of honey have their faces so daubed as to be almost spoiled. Put a super of such sections over a hive and take away as soon as the bees have had time to lick off the daub.

"I never used a sheet of cloth, as mentioned by Capt. J. E. Hetherington, to cover honey cases in a car, but last week I used newspapers, tacking them lightly on the cases. The cloth has the advantage that it is all in one piece. Perhaps better than either would be manilla paper pasted together.

"Mr. Editor, if you think it for the general good to have your program arranged to shorten up the spelling through the whole catalog of words ending in *ue* and *ugh*, I'll try to bear it manfully, even tho' it does sometimes jolt me in reading. But, say: won't it leave the word rather short if you drop the final *ugh* from the interjection 'ugh'?"

"You cannot give the absolute weight of any section of a given size, for one year it will be heavier than another. But I can give the relative weights of 3 kinds of sections for this year: 5076 beeway 4 $\frac{1}{4}$ x 1 $\frac{1}{4}$ averaged 14.94 ounces; 442 plain 5x4 $\frac{1}{4}$ x 1 $\frac{1}{4}$ averaged 13.82 ounces; 345 plain 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ x 1 $\frac{1}{2}$ averaged 13.83 ounces."

Getting Bees Out of Sections is thus discuss by F. Greiner in the American Bee-Keeper:

"There are probably but few up-to-date bee-keepers who do not find the escape a very fine thing. I consider it indispensable. But after all I have been obliged to give up its use on the hive when removing honey (comb or section honey) after the honey season is over, on account of our bees perforating or biting the cappings. When honey is still coming in everything works lovely and that is natural enough. Let us see how it does work:

"When the bees leave a super full of honey they take with them, each and every one, a full load of honey. During the honey flow most bees have their honey sacs filled. Besides, plenty of unssealed honey is in reach; they do not find it necessary to uncap any honey to get their fill. But after honey-secretion has stopped conditions are reversed and one must force the bees out of a full super very quickly or the cappings will suffer. I practice the following method:

"I first remove the cover—honey board or

SUFFERERS FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing

DR. PEIRO,

34 Central Music Hall, CHICAGO.

#2—Write at once, stating age, sex, occupation, how troubled, post-office address, and enclose return stamp for immediate reply.

Please mention Bee Journal when writing.



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The Mississippi Valley Democrat —AND— Journal of Agriculture, ST. LOUIS, MO.

A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. **Subscription, One Dollar a Year.**

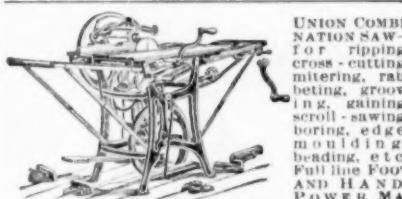
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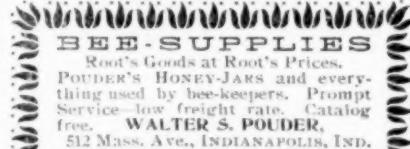
MOSQUITO BARS
might hold chickens one day, but **Page** Poultry Fence makes a permanent hemmery.

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Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.



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Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.



BEST WHITE ALFALFA HONEY

In 60-pound Tin Cans.

WE have been able to secure a quantity of **WHITE ALFALFA EXTRACTED HONEY** which we offer for the present at these prices, on board cars here in Chicago: Sample by mail, 10 cents; 2 60-pound cans, in a box, 9½ cents a pound; 4 or more cans, 9 cents a pound. **Cash with order** in all cases.

Owing to our limited supply of this fine honey, those desiring it should order promptly. Address,

GEORGE W. YORK & CO.,

118 Michigan Street, CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually world the quickest of any foundation made.

J. A. VAN DEUSEN,

Sole Manufacturer,

Sprout Brook, Montgomery Co., N.Y.

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BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send \$1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)



HOWARD M. MELBEE,
HONEYVILLE, O.

(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for \$1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with \$3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for \$1.90.

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Plans for poultry and brooder houses.

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FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

quit—using some smoke; then I lay a wet or damp sheet over the super to be removed; next I grasp the sheet near the center on one side of the hive lift it up slightly, poke the nozzle of the smoker under it and give smoke plentifully, at the same time flapping the sheet. This procedure forces the smoke into all the spaces between the sections and drives the bees down quicker than any other method I have ever tried. I learned this of Mr. Cogshall of lightning fame. As soon as I think the bees are nearly all out, I snatch the super off and give it two or three vigorous shakes which will dislodge the few bees that may have remained. It is a simple method and does not take nearly as long as it takes to tell. The escape-board is now brought into use. The bee-free supers are stackt up in piles with one escape under it and one on top of each. At dusk the supers are wheeled to the honey-house. The Porter escape is not well suited for use on a stack; any cone escape, letting in direct light, works very much better."

The Long-Ideal Hive has some attention in Australian Bee-Bulletin. "Loyalstone" says:

"Just a word regarding this my favorite hive. I don't ask bee-keepers to adopt it; I gave my experience with it and will have no other hive. I find that 20 frames are quite sufficient for a bee-keeper who knows his business, and only suggested putting another box on top for bee-keepers who cannot devote proper time in the honey season to attend to their bees. It requires a good deal of experience to work this hive properly."

On the other hand, says "Australian Yankee": "Let me give a little experience that I had with them last season: The bees built up splendidly in them, the queens occupying 20 frames, and the hives packt with bees (a novice with them would have been jubilant, but I had seen the same thing before), but not a move towards storing surplus honey, only a little along the top-bars of the frames. I extracted this out: the bees slowly filled them to about the same amount. At the same time the bees in 8-frame hives were filling their extracting-supers about every 10 days, thus more than doubling the ones in the long-ideals. Well, I stood it as long as I could, and then I put the bees that were in the long-ideals into 8-frame hives, using a queen excluder, when 'presto,' they went to work storing surplus as quickly as the others. This was not one hive only, but all the long-ideals I have. I have now cut them all down to 8 frames."

The conclusions of the editor are: "The long-ideal hive is a non-swarming hive."

THE MOST LIVE CHICKS
 from a tray full of eggs.
 That's with the
SURE HATCH
INCUBATOR
 as it goes to market, and it
 does with great regularity.
 Hundreds in use. Aut-matic
 throughout. Let me quote
 you some laid down at your
 station. Our catalog is a book full of practical Poultry
 information. It is free—of cost.
SURE HATCH INCUBATOR COMPANY, Clay Center, Nebr.
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And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.

DANDY GREEN BONE CUTTERS
 cut 1/8" kinds of green bone, hard or soft, with
 adhering meat or gristle, into fine poultry food.
 Cutters & Claws. Various sizes.
 Box easy and fastened, Green bone
 bone will double the eggs winter or
 summer. West winter food known.
 Makes long and strong layers; makes
 hocks and shoulders grow.
 Send for Free Catalogue, prices, &c.
 Stratton & Osborne, Box 21, Erie, Penn.

Bee-Supplies!

We are distributors for ROOT'S GOODS AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Kentucky, and the South.

MUTH'S SQUARE GLASS HONEY-JARS, LANGSTROTH BEE-HIVES, ETC.

Lowest Freight Rates in the country. Send for Catalog.

C. H. W. WEBER,
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pecially if empty frames be kept near the entrance. Being so large, as a rule, they will not need to be extracted from more than once in a season. In those two items there are great gains to the bee-keeper. But the large box is an expense, probably no more so than two 8 or 10 frame hives. And there is an awkwardness in handling them, the sideways leaning to take a frame out. For several mentioned reasons a few long-ideal hives are an advantage in any apiary, and very useful for out-apiaries."



Satisfied with the Results.

I have had very good success with my bees. I lost two colonies last winter, had three left, and have 10 now, and got about 75 pounds of honey. HANNAH E. HESS.
 Grand Traverse Co., Mich., Nov. 8.

Crop Almost a Total Failure.

The honey crop was almost a total failure here. Bees secured enough to winter on, provided we cellar them in good shape; but the colonies are very light in bees this fall, owing to the queens not working during the August dearth of honey. We need not be surprised if 50 to 75 percent of the bees perish where wintered on the summer stands without extra protection.

F. KINGSLEY.

Thayer Co., Nebr., Nov. 1.

Bees Did Fairly Well.

The bees have used me fairly well this season, considering that it has been a poor one for our warm-hearted pets, taking the State as a whole. The spring was backward and cool here with plenty of wind. My bees wintered finely, and came out strong in numbers, but they just held their own until June, when the clover bloom came, and wet weather came with it. About June 15 good weather came, and with it the swarming-fever, and swarm they would out of empty supers and almost empty hives. Still, I secured 800 pounds of comb honey of the best quality, from 15 colonies, spring count, and increase to 30, besides having two large swarms take Horace Greeley's advice and "go west." I attempted to go with them, but as I am obliged to wear a No. 10 coarse, leather boot, at times, I was unable to persuade

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a small quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in height. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal for 1900, with \$1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

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Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to **THE CORN BELT**, 209 Adams St., Chicago.

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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

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No. 2110.—14 kt. Heavy Gold Pen, chased barrel.....\$1.50
 Box, filler and directions with each pen. Every pen guaranteed for one year, by the manufacturers.

Readers of the American Bee Journal will be given a discount of 20 percent off above prices, as we have made special arrangements with the Diamond Point Pen Co., to give our patrons this absolutely perfect fountain pen at the wholesale price.

To secure this wholesale discount on the above fountain pens, you must send your orders direct to this office, enclosing the number of the pen you want, and a postal note or postage stamps, for the cost of same.

We are offering our readers an absolutely perfect fountain pen which is guaranteed to give entire satisfaction, as the Diamond Point Pen Co. fully warrant and guarantee them absolutely as represented.

If the pen points are not entirely satisfactory they will be exchanged at no extra expense if returned to the office of the Diamond Point Pen Co., 102 Beekman Street, New York, N. Y.

Special Premium Pen Offers.

We will mail Fountain Pen No. 2110 free as a premium to any one sending us THREE NEW subscribers to the American Bee Journal for one year, with \$3.00 to pay for same; or we will club it with the American Bee Journal for one year—both for \$2.00.

We will mail Fountain Pen No. 4310 free as a premium to any one sending us FIVE NEW subscribers to the American Bee Journal for one year, with \$5.00 to pay for same; or we will club it with the American Bee Journal for one year—both for \$2.50. Address,

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No. 2110.—Price, \$1.50, postpaid.



A Feed Cooker for \$5.00

Many farmers and poultrymen have not used feed cookers in the past because they considered the price too high. To meet this case we have designed the

RELIABLE FEED COOKER AND WATER HEATER.

It is an ideal means for cooking food for stock or poultry and for heating water for scalding hogs. Made of best cast iron, with No. 22 galvanized steel boiler. 20 gal. \$15.00—burns wood only. 50 gal. size \$12, and 100 gal. size \$16, burn either wood or coal. Don't buy until you get our free circulars.

RELIABLE INC. & BROODER CO. Box 2 QUINCY, ILL.

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Best....
Basswood

Extracted Honey...

IN BARRELS.

WE have some very fine WISCONSIN BASSWOOD EXTRACTED HONEY in barrels, each holding 300 pounds of honey, which we offer at 9 cents a pound, f.o.b. Chicago, cash with order. Sample by mail, 10 cents. We can ship promptly. Address,

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Sections, Shipping-Gases and Bee-Keepers' Supplies

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The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

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low, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 MICHIGAN STREET, CHICAGO, ILL.

This is a good time to send in your Beeswax. We are paying 24 cents a pound—CASH—for best bees-

wax.



them to travel as fast as the emigrants wished to, so they whispered a fond farewell about a half mile from the apiary. They neglected to let me know where they settled, but I understand they staked out a claim near Chicago, in order to be near a central market, thus saving transportation charges. They may be able to compete with those glucose fellows.

O. R. GRIFFIN.
Aroostook Co., Maine, Nov. 10.

Season Almost an Utter Failure.

I have a small apiary consisting of 29 colonies which gave me about 275 pounds of comb and extracted honey the past season, with no swarms. Special pains were taken in nursing them continually; I fed them up this fall with 375 pounds of granulated sugar, reducing it to a thick syrup, and added about 30 pounds of extracted honey to the whole; adding this to the more or less storage the colonies already had, they must be in good condition for winter.

For almost utter failures of honey crops, the seasons of 1898 and 1899 surpass anything of the kind known in the history of northwestern Ohio. No one thinks of fall-feeding their colonies here. Having failed two seasons in succession, I am still intensely interested in bee-culture. We hope for better things next year.

M. N. SIMON.
Wood Co., Ohio, Nov. 15.

Origin of Honey-Dew.

In the American Bee Journal of August 31 appeared an article on honey-dew, by C. C. Parsons, which ought to be published in all the bee-papers of the United States. It is the first time that I have noticed or read anything on honey-dew from what I consider a right standpoint.

It is true, as Mr. Parsons says, that the consumption of honey has been lessened by the publication of papers in which honey-dew was called "bug-juice," or the secretion of insects. Is it not strange that the human mind will cling so strongly to error, especially in the case of honey-dew, when the truth would be more pleasing and profitable? This is a field in which the "great lights" of the bee-keeping fraternity are invited to enter and investigate. The animal secretion of honey-dew is not the only erroneous idea that has found its way into good company. The sap of all plants contains sugar; starch is also perhaps always present in growing plants, and as starch is convertible into sugar the formation of sugar is probably more rapid at certain times than can be utilized or absorbed into wood fibre, and flows out thru the pores of the plant in the shape of honey-dew. This, however, is a subject of scientific investigation, which has nothing to do with the flow of sugar-water or honey-dew out of the leaves of plants—a fact which is well authenticated, and which almost any one can observe if he wishes to.

Nemaha Co., Nebr. E. H. GABUS.

Honey-Yield in S. E. Minnesota.

In line with the big honey-yields tabulated on page 693, I give the following:

In about 20 years' bee-keeping experience in Fillmore Co., Minn., my average per colony, spring count, has been about 100 pounds of extracted honey. My largest yield was in 1886, with a bunch of 15 colonies; condition in spring, average: yield per colony, 400 pounds of extracted honey. The yield of honey was not phenomenal at any time, but continuous during the entire summer. The first extracting was towards the latter part of May; last extracting Aug. 29, after which they filled up for winter. Increase the 15 to 40 colonies. The yield of the same bees for the next year was 200 pounds per colony for the lot.

My next best yield was a lot of 16 colonies, in average condition, in the spring of 1896, placed on a farm about nine miles from the place of the first and best yield. The yield per colony for the summer of

1896, was 263 $\frac{1}{4}$ pounds of extracted honey, and increase to 40 colonies. From these bees in the spring of 1897 I sold 10 colonies at \$6.00 per colony, and the yield of balance was 90 pounds to the colony, in a poor year for this locality, and increase to about 50 colonies.

In the spring of 1898 I sold 35 colonies from them for \$200, and from the remainder secured 1,200 pounds of honey, with 30 colonies of bees on hand in the fall.

My average for my whole lot of bees in 1896 was 166 pounds to the colony, spring count.

Last winter all my bee-cellars but two froze badly, and all were wet, but in one, on account of this and their poor condition in the fall, I lost 170 colonies. Of the 120 colonies left, I got about 4,000 pounds of honey, and from 14 which I bought I got about 1,000 pounds, being only about 5,000 pounds from 134 colonies, with an increase to 280 colonies. The past season was the worst in my experience in this country.

Fillmore Co., Minn. M. V. FACEY.

Convention Notice.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its 11th annual meeting at the Court House in Minneapolis, Wednesday and Thursday, Dec. 6 and 7, 1899.

J. P. WEST, Pres., Hastings, Minn.
DR. L. D. LEONARD, Sec., Minneapolis.

The Sure Hatch Incubator Co., of Clay Center, Nebr., are carrying their advertisement for the new season's business in these columns. We request our subscribers to read it. These people have not been in the incubator business as long as some others of our advertisers in this line, but the high quality of their machines is attested by the success they have made. It is generally supposed that a man or a machine is most successful away from home. If home success is a recommendation, and we believe it is, then the Sure Hatch people have many reasons for congratulation, as their machines are used very extensively in their own county and State. Read the advertisement and then write them; they may have just exactly what you want. Please don't forget to mention the American Bee Journal when writing to them.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Nov. 7.—There is a firm tone in all kinds of honey, even buckwheat sells easier than of yore. 16c is obtainable for the best white comb which we class as fancy, and 15c for No. 1 grade; stained and off grades of white, 13 $\frac{1}{2}$ to 14c; amber, 10 $\frac{1}{2}$ to 12c; and dark to buckwheat, 9 $\frac{1}{2}$ to 10c. Extracted white clover and basswood, 8 $\frac{1}{2}$ to 9c; amber, 7 $\frac{1}{2}$ to 8c; dark, 6 $\frac{1}{2}$ to 7c. Beeswax, 27c.

R. A. BURNETT & Co.

CINCINNATI, Nov. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8 $\frac{1}{2}$ to 9c; amber and Southern, 6 $\frac{1}{2}$ to 7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15 $\frac{1}{2}$ to 16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth.

KANSAS CITY, Nov. 9.—We quote No. 1 white comb, 13 $\frac{1}{2}$ to 14c; No. 2, 13 $\frac{1}{2}$ to 13c; No. 1 amber, 13 $\frac{1}{2}$ to 14c; No. 2, 12 $\frac{1}{2}$ to 13c. Extracted, white, 7 $\frac{1}{2}$ to 8c; amber, 7 $\frac{1}{2}$ to 8c; dark, 5 $\frac{1}{2}$ to 6c. Beeswax, 20c to 22c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13 $\frac{1}{2}$ to 14c; amber, 11 $\frac{1}{2}$ to 12c; and buckwheat, 9 $\frac{1}{2}$ to 11c, as to quality. Extracted remains firm at following prices: California white, 8 $\frac{1}{2}$ c; light amber, 8c; white clover and basswood, 8c; amber, 7 $\frac{1}{2}$ c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7 $\frac{1}{2}$ c per pound; other grades, as to quality, from 7c to 75c gallon. Beeswax quiet at 20c to 27c. HILDRETH & SEGELEKIN.

BUFFALO, Nov. 6.—Actual supplies in Buffalo are smallest for several seasons at this date. Strictly fancy 1-lb. comb, active, 15c; No. 1 and choice, 13 $\frac{1}{2}$ to 14c; dark, buckwheat, etc., 8 $\frac{1}{2}$ to 12c, as to grade. Beeswax, 27c to 28c. BATTERSON & Co.

SAN FRANCISCO, Nov. 8.—White comb, 11 $\frac{1}{2}$ to 12c; amber, 8 $\frac{1}{2}$ to 10c. Extracted, white, 7 $\frac{1}{2}$ to 8c; light amber, 7 $\frac{1}{2}$ to 8c; amber, 5 $\frac{1}{2}$ to 6c; Beeswax, 26c to 27c.

BOSTON, Nov. 7.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13 $\frac{1}{2}$ to 14c; buckwheat will not sell in this city. Extracted, light amber, 7 $\frac{1}{2}$ to 8c.

We are pleased to note that our market continues in splendid condition. While the supply is light, yet, owing to the high prices, it seems to be quite equal to the demand. Later on when the trade realizes the shortage more thoroughly the demand undoubtedly will be much better.

BLAKE, SCOTT & LEE.

ALBANY, Nov. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13 $\frac{1}{2}$ to 14c; mixt, 11 $\frac{1}{2}$ to 13c; buckwheat, 10 $\frac{1}{2}$ to 11c. Extracted, white, 8 $\frac{1}{2}$ to 9c; mixt, 6 $\frac{1}{2}$ to 7c; dark, 6c. Beeswax, 26c to 28c. MACDOUGAL & Co.

Successors to Chas. McCulloch & Co.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14 $\frac{1}{2}$ to 15c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices. White extracted, 8c. PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15 $\frac{1}{2}$ to 16c; No. 1 white, 14 $\frac{1}{2}$ to 15c; dark grades, 10 $\frac{1}{2}$ to 12c. Demand good and supply light. No extracted in market. White would sell for 8 $\frac{1}{2}$ to 9c. Beeswax, 23 $\frac{1}{2}$ to 24c. M. H. HUNT & SON.

CLEVELAND, Oct. 18.—Fancy white, 16c; No. 1 white, 15c; fancy amber, 12 $\frac{1}{2}$ to 13c; No. 1 amber, 11 $\frac{1}{2}$ to 12c; fancy dark, 9 $\frac{1}{2}$ to 10c; White extracted, 8 $\frac{1}{2}$ to 9c; amber, 7 $\frac{1}{2}$ to 8c. A. B. WILLIAMS & Co.

WANTED.—Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & Co., 132 So. Water St., Chicago, Ill.

WANTED.—Extracted honey all kinds; mail sample and price expected delivered at Cincinnati. I pay spot cash on delivery.

C. H. W. WEBER,
Successor to Chas. Muth & Son and A. Muth,
40 Atw 2146-48 Central Ave., Cincinnati, O.

Wanted! Your HONEY

We will buy it, no matter where you are. Address,
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"The Golden Morning"

NEWS AND GOSIP OF A NEW BOOK ON THE BIBLE have been current in book and Christian circles everywhere for some months. In its authorship was to be combined the superb talents and literary abilities of three of the greatest lights in the world of religious literature.

The book is about to appear and on its title page in collaboration as authors are found the names of that most popular of all writers, **IAN MACLAREN** (Rev. John Watson), together with **H. M. WHARTON, D.D.**, the great Evangelist, and **J. WILLIAM BUEL, Ph.D.**, one of the most prominent and popular writers on Biblical subjects. **A MASTERPIECE INDEED** must be the book which calls to its creation such a combination of unmatched talents. **IT IS A MASTERSPIECE**—and it is good news we bring our readers when we tell them that after the most persistent endeavor and the most industrious and earnest negotiations with the Publishers, this paper is one of a syndicate which has secured the entire first edition for distribution among their subscribers, **NOT AS A MEANS OF WINNING PROFITS**, but to encourage the people to become regular readers, because of the unusual privileges which are offered regular patrons.

The book is entitled "**THE GOLDEN MORNING**," and while it was intended to be a \$5.00 book, and has everything about it—authorship, illustrations, paper, printing and binding—to warrant that price, we have, after many objections and refusals, made terms whereby **WE ARE IN POSITION TO OFFER IT TO OUR READERS AT A GREAT REDUCTION**. It contains nearly 800 pages and over 500 superb illustrations. It is printed with clear type on coated paper, and is bound in beautifully illuminated covers, with gold and colored stamping.

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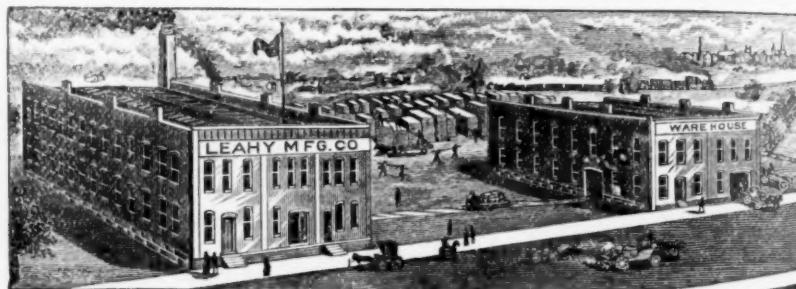
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